Claims

1. A method of joining components (such as plates 3, bolts, nuts, or similar elements) with at least one plate (2), wherein
   punch (1) or similar element through die opening (4) of the base element (6) of die (5)
   - initially draws deeply or clinches or otherwise contacts these plates (2, 3), and
   - then, this deep-drawn plate material compresses, under plastic deformation of said material, between punch (1) and base surface (9) of the die, perpendicular to axial direction (III), and counter to the force of elastically yielding wall sections (8) of die opening (4),
   - whereby this radially compressed plate material, in order to create a connection, undercuts the non-deep-drawn areas of plate (2),
   wherein
   - between yielding wall sections (8) of die opening (4), there are wall sections (7) securely attached to base section (6) of die (5), - yielding wall sections (8) are displaceable to a surface running parallel to the displacement direction and pass uninterrupted to base surface (9).

2. Method, in particular, according to Claim 1, wherein,
   - the radial path of yielding wall sections (8),
   - to achieve a seal and consequent hardening of the compressed and crushed material,
   - is rigidly limited (11) upon traversing a predetermined distance.

3. Method, according to Claim 1 or 2, wherein the limit of the radial path, viewed across the perimeter of die (5), is variously modifiable, or varies in size such that various hardnesses can be achieved during cold forming.

4. Method, according to Claims 1 to 3, wherein punch (1), at least that part inserted into die opening (4), remains as "lost punch" (16) in the insertion opening in a rivet-like and form-fit manner.

5. Tool with punch (1) and die (5) for a pressed joint connection or similar joining of components (such as plates (3), bolts, nuts, or similar elements) with at least one plate (2),
   - with work opening (4) (die opening) in multi-part die (5),
   - with a plurality of outwardly yielding cladding pieces (8) (wall sections), arranged radially around work opening (8) of die (5),
   - with base surface (9) of die (5) positioned opposite the end side of die (1), axially adjacent to work opening (4),
   which is provided on a base element,
   in particular, for the performance of the method according to one of the previous claims,
   wherein
   - along the perimeter of work opening *(4),* between the cladding pieces (8), several cladding sections (7) are firmly connected to base element (6) (one-piece), and that these cladding sections (7) serve as radial guides for yielding cladding pieces (8).

6. Tool, according to Claim 5, wherein the radial path of cladding pieces (8) is limited during the joining process of die (5) by fixed stop element (11).

7. Tool, according to Claims 5 or 6, wherein stop element (11), limiting the radial path, is fixed (one piece) to the base element of die (5).

8. Tool, according to one of Claims 5 to 7, with base surface (9) of base element (6) facing work opening (4) functioning as support and radial guide for cladding pieces (8).

9. Tool, according to one of Claims 5 to 8, wherein cladding pieces (8) are stressed radially in the direction of work opening (4) by spring load (10).

10. Tool, according to Claim 9, wherein the facing walls forming the radial

guide of moveable cladding piece (8) are two cladding sections (7) parallel to one another.

11. Tool, according to one of Claims 5 to 10, wherein punch (16) is a lost punch in the form of a rivet, nut, bolt, or similar element, designed to remain in place upon completion of the joining, in either a form-fit or a force-fit manner in the deep-draw opening it created in plate (2).

12. Tool, in particular, according to Claim 11, wherein the rivet features a depression on at least one of its end sides.

13. Tool, according to Claims 11 or 12, wherein the material of lost punch (16) is harder than the plate material compressed during the joining process.

14. Tool, according to one of Claims 11 to 13, wherein in the radial cladding surface of lost punch (16) a radial groove is provided for receiving the compressed material.

15. Tool, according to one of Claims 11 to 14, wherein the die exhibits an elevation on base surface (9) facing the end side.

16. Tool, according to one of Claims 5 to 15, wherein an open circular channel is located on the front in base surface (9) of the base element.

17. Tool, according to one of Claims 5 to 16, wherein a central, symmetrical elevation is located on base surface (9) of the base element.